

GERGELY T. ZIMANYI

Physics Department, University of California, One Shields Ave., Davis, CA 95616
phone: 530-400-3936; email: zimanyi@physics.ucdavis.edu; web: zimanyi.ucdavis.edu

Professional Preparation

Eötvös University, Budapest, Hungary	Physics	B.S. 1977-1982
Eötvös University, Budapest, Hungary	Physics	Ph.D. 1982-1985
KFA, Julich, Germany	Visiting Scientist	1985
SUNY at Stony Brook, NY	IBM Postdoctoral Fellow	1986-1988
Rutgers University, New Brunswick NJ	Postdoctoral Fellow	1988-1989

Appointments

University of California, Davis, CA	Professor	1997-present
University of California, Davis, CA	Associate Professor	1993-1997
University of California, Davis, CA	Assistant Professor	1989-1993

Recent Honors

Distinguished Teacher of UC Davis Award	2011
Fellow of the American Physical Society	2013
TEDx talk on nanotechnology: “Solving big problems with small tools”	2013

Synergistic Activities

1. Member of Review Board of national Research Center on solar energy	2012-2019
2. Founding Leader, Solar Advisory Board for CA Energy Commission	2007-2008
3. Leader of NSF Solar Collaborative, a 7-professor collaboration on solar cells	2009-2013
4. Leader of large-scale collaboration of close to 50 researchers of the University of California and the Los Alamos National Lab on vortex physics	2000-2004
5. Member of five-country collaboration with Toyota to develop a new generation of permanent magnets for the electric motor of the Toyota Prius hybrid car	2008-2022

Closely related products

1. [*Hydrogen-induced degradation dynamics in silicon heterojunction solar cells via machine learning*](#) A. Diggs, Z. Zhao, R. Vatan Meidanshahi, D. Unruh, S. Manzoor, M. Bertoni, S.M. Goodnick, G.T. Zimanyi; *Nature Comm. Materials*, **4**, 24 (2023)
2. [*Gaussian approximation potential for amorphous Si:H*](#) D. Unruh, R. Vatan Meidanshahi, S.M. Goodnick, G. Csanyi, G.T. Zimanyi; *Phys. Rev. Mat.* **6**, 065603 (2022).
3. [*From Femtoseconds to Gigaseconds: The SolDeg Platform for the Performance Degradation Analysis of Silicon Heterojunction Solar Cells*](#) D. Unruh, R. Vatan Meidanshahi, S. Manzoor, M. Bertoni, S.M. Goodnick, G.T. Zimanyi; *ACS Applied Materials & Interfaces* **3**, 32424 (2022).
4. [*High-Mobility Hole Transport in Single-Grain PbSe Quantum Dot Superlattice Transistors*](#) A. Abelson, C. Qian, Z. Crawford, G. T. Zimanyi, and M. Law; *Nano Lett.* **22**, 9578 (2022).
5. [*Disordered Mott-Hubbard Physics in Nanoparticle Solids: Transitions Driven by Disorder, Interactions and their Interplay*](#), D. Unruh, A. Camjayi, C. Hansen, J. Bobadilla, M. Rozenberg and G.T. Zimanyi; *Nano Lett.* **20**, 8569 (2020).

Other products

1. [*Hierarchical carrier transport simulator for defected nanoparticle solids*](#), C. Hansen, D. Unruh, M. Alba, C. Qian, A. Abelson, M. Law, G.T. Zimanyi; *Scientific Reports* (Nature group) **11**, 7458 (2021).
2. [*Structural characterization of a polycrystalline epitaxially-fused colloidal quantum dot superlattice by electron tomography*](#), X. Chu, H. Heidari, A. Abelson, D. Unruh, C. Hansen, C. Qian, G.T. Zimanyi, M. Law, A. Moule; *J. Mat. Chem. A*, **8**, 18254 (2020).
3. [*Commensuration effects in layered nanoparticle solids*](#), L. Qu, C. Hansen, M. Vörös, and G.T. Zimanyi; *Phys. Rev. B* **101**, 045420 (2020).
4. [*Multiscale model approaches to the design of advanced permanent magnets*](#), S.C. Westmoreland, R.F.L. Evans, G. Hrkac, T. Schrefl, G.T. Zimanyi, M. Winklhofer, N. Sakuma, M. Yano, A. Kato, T. Shoji, A. Manabe, M. Ito, R.W. Chantrell; *Scripta Materialia* **148**, 56 (2018).
5. [*Metal-Insulator Transition in Nanoparticle Solids: Insights from Kinetic Monte Carlo Simulations*](#), L. Qu, M. Vörös, G.T. Zimanyi; *Scientific Reports* (Nature group) **7**, 7071 (2017).

Career Metrics

1. Papers: **143**, incl. **38** with impact factor higher than 8 (Physical Review Lett., Nano Lett.)
2. Citations: more than **6,650**
3. h index: **45**
4. Grants: PI or co-PI on grants totaling more than **\$5M**
5. Invited talks, seminars, colloquia: more than **100**, incl. at Harvard, Stanford, and Yale
6. Graduates of my group: **12** got professor/academic research positions, **5** in high tech